
Subject: Problem with logarithmic axes using AXIS IDL command

Posted by [hibou21](#) on Wed, 03 Apr 2013 02:03:45 GMT

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I am having a strange IDL problem involving logarithmic axes. I am trying to add a logarithmic axis on the right hand side of a plot using the AXIS command. The function that relates the values on the left-hand-side to those on the right-hand-side is:

$$(90.0/3.85)*(10.0d^{(!Y.CRANGE/2.50d)} - (90.0/3.85))$$

(The value $90.0/3.85 \approx 23.4$)

When I try to plot $(90.0/3.85)*(10.0d^{(!Y.CRANGE/2.50d)}$, without subtracting the final number, IDL does what it's supposed to do.

However, when I try to plot my full expression:

$$(90.0/3.85)*(10.0d^{(!Y.CRANGE/2.50d)} - (90.0/3.85))$$

IDL gives the error:

% AXIS: Warning: Infinite plot range.

I played around with it a bit and it turns out you can subtract up to about 14.8 alright, but once you try subtracting more than that, it stops working and gives the error.

Here is a sample plot that you can use to reproduce the error:

```
IDL> plot, [1,2,3], [1,2,3], yr=[-0.5,4.5],ysty=9
```

```
IDL> AXIS, YAXIS = 1, /ylog, YRANGE = (90.0/3.85)*(10.0d^{(!Y.CRANGE/2.50d))-15, /ysty, /save
```

I've tried resetting !Y.Type to both 0 and 1, as suggested online, but to no effect. I've also tried inputting the YRANGE values manually [-8.6269713,1451.5886], but it doesn't make a difference. I'm really stumped by this...

My IDL information: IDL Version 7.0, Mac OS X (darwin i386 m32). (c) 2007, ITT Visual Information Solutions
